CLAIMS

What is claimed is:

1. A method of wafer processing, comprising the steps of:
    when a wafer lot arrives at a processing tool in a send cassette,
        randomizing said lot by transporting individual wafers thereof
    variously,
5   within said tool,
    from said cassette
    either to a processing position or
    to a wafer staging area.

2. The method of Claim 1, further comprising the contemporaneous
    step of recording process sequence data for said wafers.

3. The method of Claim 1, further comprising the subsequent step of
    correlating fault and/or parametric data with process sequence
    data resulting from said randomization step.

4. The method of Claim 1, further comprising the subsequent step of
    correlating fault and/or parametric data with process sequence
    data resulting from said randomization step, and controlling
    process parameters accordingly.

5. The method of Claim 1, further comprising the contemporaneous
    step of recording positional data for said wafers.

6. A method of wafer processing, comprising the steps of:

when a wafer lot arrives at a processing tool in a send cassette,

randomizing said lot by transporting individual wafers thereof variously,

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within said tool,

from said cassette to a processing position,

or from said cassette to a wafer staging area, if said wafer staging area is empty,

or from said wafer staging area to said processing position.

7. The method of Claim 6, further comprising the contemporaneous step of recording process sequence data for said wafers.

8. The method of Claim 6, further comprising the subsequent step of correlating fault and/or parametric data with process sequence data resulting from said randomization step.

9. The method of Claim 6, further comprising the subsequent step of correlating fault and/or parametric data with process sequence data resulting from said randomization step, and controlling process parameters accordingly.

10. A method of wafer processing, comprising the steps of:

when a wafer lot arrives at a processing tool in a send cassette, randomizing said lot by transporting individual wafers thereof variously,

5   within said tool,

from said cassette

either to a processing position or

to a wafer staging area.

11. The method of Claim 10, further comprising the contemporaneous step of recording process sequence data for said wafers.

12. The method of Claim 10, further comprising the subsequent step of correlating fault and/or parametric data with process sequence data resulting from said randomization step.

13. The method of Claim 10, further comprising the subsequent step of correlating fault and/or parametric data with process sequence data resulting from said randomization step, and controlling process parameters accordingly.

14. A method of wafer processing, comprising the steps of:
   randomizing a wafer lot by transporting individual wafers thereof
      variously,
      within a processing tool,
      from a processing position to a wafer cassette,
      from a wafer staging area to a wafer cassette,
      or from said processing position to said wafer staging area.

15. The method of Claim 14, further comprising the contemporaneous step of recording process sequence data for said wafers.

16. The method of Claim 14, further comprising the subsequent step of correlating fault and/or parametric data with process sequence data resulting from said randomization step.

17. The method of Claim 14, further comprising the subsequent step of correlating fault and/or parametric data with process sequence data resulting from said randomization step, and controlling process parameters accordingly.

18. A fabrication method, comprising the steps of:

varying the history of wafers within a lot by transporting individual ones thereof

within a processing tool with multiple processing chambers, among said chambers and wafer cassette and/or staging locations in various different sequences.

19. The method of Claim 18, further comprising the contemporaneous step of recording process sequence data for said wafers.

20. The method of Claim 18, further comprising the subsequent step of correlating fault and/or parametric data with process sequence data resulting from said varying step.

21. The method of Claim 18, further comprising the subsequent step of correlating fault and/or parametric data with process sequence data resulting from said varying step, and controlling process parameters accordingly.

22. A processing tool which is programmed to perform the method of Claim 1.

23. A processing tool which is programmed to perform the method of Claim 6.

24. A processing tool which is programmed to perform the method of Claim 10.

25. A processing tool which is programmed to perform the method of Claim 14.

26. A processing tool which is programmed to perform the method of Claim 18.